



OFFICE OF
RIVER PROTECTION
United States Department of Energy

Proposed Permit Modification for Effluent Management Facility Underground Transfer Lines

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Presented by: U.S. Department of Energy – Office of River Protection

May 3, 2017



Hanford Historical Overview



1940s-1980s: Construction & Plutonium Production



1940s-1980s: Creation of Tank Waste



Present: Waste Treatment Plant Construction

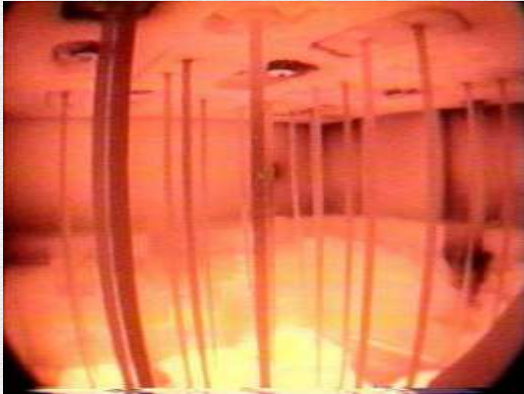


Present: Stabilization & Safe Storage





WTP Mission: Immobilize Waste in Glass



Molten glass and waste in a melter



Simulated vitrified waste



**High-level waste (tall) and
low-activity waste containers**



**Simulated vitrified waste
in a container**





EMF provides four key services to support Direct Feed Low-Activity Waste (DFLAW) initiative

- Provides low-point drain for waste transfer line flushing
- Concentrates low-activity radioactive effluents from the Low-Activity Waste (LAW) off-gas treatment system using an evaporator
- Transfers evaporator condensate to the Effluent Treatment Facility (outside of the WTP project) via underground waste transfer lines
- Recycles evaporator concentrate back into the LAW vitrification process



- A permit issued under the Resource Conservation and Recovery Act (RCRA) provides the regulatory framework for management of hazardous waste at Hanford
- Washington Department of Ecology is the regulatory authority for the hazardous waste permit, which includes WTP
- ❖ **State regulations require the WTP permit to be modified to install additional underground waste transfer lines to support planned operations of the WTP. This is a Class 2 Permit Modification.**





- The purpose of EMF is to manage secondary liquid effluent generated by the LAW Facility off-gas ventilation system.
- This proposed modification request seeks approval to install underground waste transfer lines to support WTP operations.
- The scope of the modification is limited to new underground transfer lines located within the WTP site boundary.
- Proposed transfer lines will be double-walled pipes constructed of stainless steel with a carbon steel encasement pipe coated with a water barrier.
- Conditions for installation of similar lines already exist in the WTP permit.
- The permit modification includes documents that provide an engineering design basis for installation of the underground waste transfer lines.





- This proposed modification documentation includes:
 - Independent Qualified Registered Professional Engineer Reports
 - Pipe Design Documents for things like material selection, epoxy coatings, pipe support, and leak detection.
 - Piping and Instrumentation Drawings and Process Flow Diagrams.





- Comment period open through **June 9, 2017**
- Submit comments via mail or email (preferred) to the Washington Department of Ecology:
 - Dan McDonald
 - Washington Department of Ecology
 - 3100 Port of Benton Boulevard
 - Richland, WA 99354
 - Email: Hanford@ecy.wa.gov
- Following the close of the 60-day comment period, Ecology will address public comments, issue its decision on the modification, and provide a 30-day appeal period (schedule TBD)





Questions?



The Hanford Reach
White Bluffs Overlooking the Columbia River



